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- 1 a detector responsive to a light signal generated by the light source and reflected
- 2 from a transparent cylinder when said transparent cylinder is coupled to said rotating
- 3 means; and
- 4 a movement means for moving the light source in a vertical motion.

11. The spin cytometer of claim 10, wherein the rotating means is further adapted to sequentially rotate a transparent cylinder in two (2) directions.

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D3

12. The spin cytometer of claim 11 wherein the rotating means is adapted to rotate a transparent cylinder between approximately 50 and 3000 revolutions per minute.

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13. The spin cytometer of claim 10, wherein the rotating means is adapted to receive a transparent cylinder comprising:

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with

- 3 a closed end;
- 4 an open end;
- 5 a cell guide member having a first side oriented toward the open end, a second
- 6 side oriented toward the closed, and a passage from the first side to the second side;
- 7 and
- 8 a cap adapted to seal the open end.

14. The spin cytometer of claim 13, wherein the passage is smaller at said first side than it is at said second side.

15. The spin cytometer of claim 14, wherein the passage is substantially smaller than the diameter of said transparent cylinder.

16. The spin cytometer of claim 13, wherein the closed end has a smaller outside diameter than the open end.

Sub D1
1 17. The spin cytometer of claim 13, wherein said transparent cylinder comprises a
2 polystyrene cylinder.

Sub B4
1 18. The spin cytometer of claim 13, wherein an inner wall of said transparent
2 cylinder comprises an organic photoreceptor material.

Sub C3
1 19. The spin cytometer of claim 18, wherein the organic photoreceptor material is
2 activated by a wave length of approximately 300 nanometers to approximately 100
3 nanometers.

1 20. The spin cytometer of claim 19, wherein the organic photoreceptor material
2 comprises dibromo anthanthrone.

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1 21. The spin cytometer of claim 10, wherein the rotating means comprises a stepper
2 motor.

1 22. The spin cytometer of claim 10, wherein the light source comprises a light
2 emitting diode.

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1 23. The spin cytometer of claim 22, wherein the light emitting diode is adapted to
2 emit a light having a wavelength of between approximately 300 nanometers and 100
3 nanometers.

1 24. The spin cytometer of claim 10, wherein the detector further comprises an
2 analog to digital converter.

1 25. The spin cytometer of claim 24, wherein the detector further comprises a
2 processing means for associating a location identifier with an analog to digital converter
3 output value, the location identifier identifying a location on a transparent cylinder at
4 which the digital to analog value was obtained.

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26. The spin cytometer of claim 10, further comprising an additional one (1) or more light sources, each light source adapted to illuminate at least a portion of a transparent cylinder when said transparent cylinder is coupled to said rotating means.

27. The spin cytometer of claim 26, wherein each of the additional one (1) or more light sources are adapted to emit a different wavelength.

28. The spin cytometer of claim 10, further comprising at least one diffraction grating.

29. The spin cytometer of claim 10, wherein the detector comprises a photomultiplier.

30. The spin cytometer of claim 10, wherein the detector comprises a CCD device.

31. The spin cytometer of claim 27, further comprising an additional one (1) or more detectors, each detector responsive to a light signal generated by one of the light sources and reflected from a transparent cylinder when said transparent cylinder is coupled to said rotating means.

32. A spin cytometer, comprising:
 a rotating means adapted to receive and rotate a transparent cylinder;
 a light source adapted to illuminate at least a portion of a transparent cylinder when said transparent cylinder is coupled to said rotating means;
 a detector responsive to a light signal generated by the light source and reflected from a transparent cylinder when said transparent cylinder is coupled to said rotating means; and
 a movement means for moving the rotating means in a vertical motion.